(vi) Fuel usage time for combustion of oil during the hour, rounded to the nearest 15 min.

(2) For each hour when the unit is combusting gaseous fuel,

(i) Date and hour;

(ii) Hourly average fuel flow rate of gaseous fuel (100 scfh) (flag value if derived from missing data procedures);

(iii) Gross calorific value (heat content) of gaseous fuel, used to determine heat input (Btu/scf) (flag value if derived from missing data procedures);

(iv) Hourly average NO_X emission rate from combustion of gaseous fuel (lb/mmBtu, rounded to nearest hundredth);

(v) Heat input rate from gaseous fuel (mmBtu/hr, rounded to the nearest tenth); and

(vi) Fuel usage time for combustion of gaseous fuel during the hour, rounded to the nearest 15 min.

(3) For each hour when the unit combusts any fuel:

(i) Date and hour;

(ii) Total heat input from all fuels (mmBtu, rounded to the nearest tenth);

(iii) Hourly average NO_X emission rate for the unit for all fuels;

(iv) For stationary gas turbines and diesel or dual-fuel reciprocating engines, hourly averages of operating parameters under section 2.3 of appendix E (flag if value is outside of manufacturer's recommended range);

(v) For boilers, hourly average boiler O_2 reading (percent, rounded to the nearest tenth) (flag if value exceeds by more than 2 percentage points the O_2 level recorded at the same heat input during the previous NO_X emission rate test).

(4) For each fuel sample:

(i) Date of sampling;

(ii) Gross calorific value (heat content) (Btu/lb for oil, Btu/scf for gaseous fuel); and

(iii) Density or specific gravity, if required to convert volume to mass.

(e) *Specific SO_2 emission record provisions during the combustion of gaseous fuel.* (1) If SO_2 emissions are determined in accordance with the provisions in §75.11(e)(2) during hours in which only gaseous fuel is combusted in a unit with an SO_2 CEMS, the owner or operator shall record the information in paragraph (c)(3) of this section in lieu of the information in §§75.54(c)(1) and (c)(3) or §§75.57(c)(1) and (c)(4), for those hours.

(2) The provisions of this paragraph apply to a unit which, in accordance with the provisions of §75.11(e)(3), uses an SO_2 CEMS to determine SO_2 emissions during hours in which only gaseous fuel is combusted in the unit. If the unit sometimes burns only gaseous fuel that is very low sulfur fuel (as defined in §72.2 of this chapter) as a primary and/or backup fuel and at other times combusts higher-sulfur fuels, such as coal or oil, as primary and/or backup fuel(s), then the owner or operator shall keep records on-site, suitable for inspection, of the type(s) of fuel(s) burned during each period of missing SO_2 data and the number of hours that each type of fuel was combusted in the unit during each missing data period. This recordkeeping requirement does not apply to an affected unit that burns very low sulfur fuel exclusively, nor does it apply to a unit that burns such gaseous fuel(s) only during unit startup.

[60 FR 26535, 26568, May 17, 1995, as amended at 61 FR 59161, Nov. 20, 1996; 64 FR 28608, May 26, 1999]

§75.56 Certification, quality assurance and quality control record provisions.

Before April 1, 2000, the owner or operator shall meet the requirements of either this section or §75.59. On and after April 1, 2000, the owner or operator shall meet the requirements of §75.59.

(a) *Continuous emission or opacity monitoring systems.* The owner or operator shall record the applicable information in this section for each certified monitor or certified monitoring system (including certified backup monitors) measuring and recording emissions or flow from an affected unit.

(1) For each SO_2 or NO_X pollutant concentration monitor, flow monitor, CO_2 monitor, or diluent gas monitor, the owner or operator shall record the following for all daily and 7-day calibration error tests, including any follow-up tests after corrective action:

(i) Component/system identification code;

(ii) Instrument span;

(iii) Date and hour;

(iv) Reference value, (i.e., calibration gas concentration or reference signal value, in ppm or other appropriate units);

(v) Observed value (monitor response during calibration, in ppm or other appropriate units);

(vi) Percent calibration error (rounded to nearest tenth of a percent); and

(vii) For 7-day calibration tests for certification or recertification, a certification from the cylinder gas vendor or CEMS vendor, that calibration gas as defined in §72.2 and appendix A of this part, were used to conduct calibration error testing; and

(viii) Description of any adjustments, corrective actions, or maintenance following test.

(2) For each flow monitor, the owner or operator shall record the following for all daily interference checks, including any follow-up tests after corrective action:

(i) Code indicating whether monitor passes or fails the interference check; and

(ii) Description of any adjustments, corrective actions, or maintenance following test.

(3) For each SO_2 or NO_X pollutant concentration monitor, CO_2 monitor, or diluent gas monitor, the owner or operator shall record the following for the initial and all subsequent linearity check(s), including any follow-up tests after corrective action:

(i) Component/system identification code;

(ii) Instrument span;

(iii) Date and hour;

(iv) Reference value (i.e., reference gas concentration, in ppm or other appropriate units);

(v) Observed value (average monitor response at each reference gas concentration, in ppm or other appropriate units);

(vi) Percent error at each of three reference gas concentrations (rounded to nearest tenth of a percent); and

(vii) Description of any adjustments, corrective action, or maintenance following test.

(4) For each flow monitor, where applicable, the owner or operator shall record the following for all quarterly leak checks, including any follow-up tests after corrective action:

(i) Code indicating whether monitor passes or fails the quarterly leak check; and

(ii) Description of any adjustments, corrective actions, or maintenance following test.

(5) For each SO_2 pollutant concentration monitor, flow monitor, CO_2 pollutant concentration monitor; NO_X continuous emission monitoring system, SO_2-diluent continuous emission monitoring system, and approved alternative monitoring system, the owner or operator shall record the following information for the initial and all subsequent relative accuracy tests and test audits:

(i) Date and hour;

(ii) Reference method(s) used;

(iii) Individual test run data from the relative accuracy test audit for the SO_2 concentration monitor, flow monitor, CO_2 pollutant concentration monitor, NO_X continuous emission monitoring system, SO_2-diluent continuous emission monitoring system, or approved alternative monitoring systems, including:

(A) Date, hour, and minute of beginning of test run,

(B) Date, hour, and minute of end of test run,

(C) Component/system identification code,

(D) Run number,

(E) Run data for monitor;

(F) Run data for reference method; and

(G) Flag value (0 or 1) indicating whether run has been used in calculating relative accuracy and bias values.

(iv) Calculations and tabulated results, as follows:

(A) Arithmetic mean of the monitoring system measurement values, reference method values, and of their differences, as specified in equation A–7 in appendix A to this part.

(B) Standard deviation, as specified in equation A–8 in appendix A to this part.

(C) Confidence coefficient, as specified in equation A–9 in appendix A to this part.

(D) Relative accuracy test results, as specified in equation A–10 in appendix

A to this part. (For the 3-level flow monitor test only, relative accuracy test results should be recorded at each of three gas velocities. Each of these three gas velocities shall be expressed as a total gross unit load, rounded to the nearest MWe or as steam load, rounded to the nearest thousand lb/hr.)

(E) Bias test results as specified in section 7.6.4 in appendix A to this part.

(F) Bias adjustment factor from equations A–11 and A–12 in appendix A to this part for any monitoring system or component that failed the bias test and 1.0 for any monitoring system or component that passed the bias test. (For flow monitors only, bias adjustment factors should be recorded at each of three gas velocities).

(v) Description of any adjustment, corrective action, or maintenance following test.

(vi) F-factor value(s) used to convert NO_X pollutant concentration and diluent gas (O_2 or CO_2) concentration measurements into NO_X emission rates (in lb/mmBtu), heat input or CO_2 emissions.

(vii) For flow monitors, the equation used to linearize the flow monitor and the numerical values of the polynomial coefficients or K factor(s) of that equation.

(viii) The raw data and calculated results for any stratification tests performed in accordance with sections 6.5.6.1 through 6.5.6.3 in appendix A to this part.

(ix) For moisture monitoring systems, the coefficient or ''K'' factor or other mathematical algorithm used to adjust the monitoring system with respect to the reference method.

(6) [Reserved]

(7) Results of all trial runs and certification tests and quality assurance activities and measurements (including all reference method field test sheets, charts, records of combined system responses, laboratory analyses, and example calculations) necessary to substantiate compliance with all relevant appendices in this part. This information shall include, but shall not be limited to, the following reference method data:

(i) For each run of each test using method 2 in appendix A of part 60 of this chapter to determine volumetric flow rate:

(A) Pitot tube coefficient;

(B) Date of pitot tube calibration;

(C) Average square root of velocity head of stack gas (inches of water) for the run;

(D) Average absolute stack gas temperature, °R;

(E) Barometric pressure at test port, inches of mercury;

(F) Stack static pressure, inches of H_2O;

(G) Absolute stack gas pressure, inches of mercury;

(H) Moisture content of stack gas, percent;

(I) Molecular weight of stack gas, wet basis (lb/lb-mole);

(J) Number of reference method measurements during the run; and

(K) Total volumetric flowrate (scfh, wet basis).

(ii) For each test using method 2 in appendix A of part 60 of this chapter to determine volumetric flow rate:

(A) Information indicating whether or not the location meets requirements of method 1 in appendix A of part 60 of this chapter;

(B) Information indicating whether or not the equipment passed the leak check after every run included in the relative accuracy test;

(C) Stack inside diameter at test port (ft);

(D) Duct side height and width at test port (ft);

(E) Stack or duct cross-sectional area at test port (ft^2); and

(F) Designation as to the load level of the test.

(iii) For each run of each test using method 6C, 7E, or 3A in appendix A of part 60 of this chapter to determine SO_2, NO_X, CO_2, or O_2 concentration:

(A) Run start date;

(B) Run start time;

(C) Run end date;

(D) Run end time;

(E) Span of reference method analyzer;

(F) Reference gas concentration (low, mid-, and high gas levels);

(G) Initial and final analyzer calibration response (low, mid- and high gas levels);

(H) Analyzer calibration error (low, mid-, and high gas levels);

(I) Pre-test and post-test analyzer bias (zero and upscale gas levels);

(J) Calibration drift and zero drift of analyzer;

(K) Indication as to which data are from a pretest and which are from a posttest;

(L) Calibration gas level (zero, mid-level, or high); and

(M) Moisture content of stack gas, in percent, if needed to convert to moisture basis of CEMS being tested.

(iv) For each test using method 6C, 7E, or 3A in appendix A of part 60 of this chapter to determine SO_2, NO_X CO_2, or O_2 concentration:

(A) Pollutant being measured;

(B) Test number;

(C) Date of interference test;

(D) Results of interference test;

(E) Date of NO_2 to NO conversion test (method 7E only);

(F) Results of NO_2 to NO conversion test (method 7E only).

(v) For each calibration gas cylinder used to test using method 6C, 7E, or 3A in appendix A of part 60 of this chapter to determine SO_2, NO_X, CO_2, or O_2 concentration:

(A) Cylinder gas vendor name from certification;

(B) Cylinder number;

(C) Cylinder expiration date;

(D) Pollutant(s) in cylinder; and

(E) Cylinder gas concentration(s).

(b) *Excepted monitoring systems for gas-fired and oil-fired units.* The owner or operator shall record the applicable information in this section for each excepted monitoring system following the requirements of appendix D of this part or appendix E of this part for determining and recording emissions from an affected unit.

(1) For each oil-fired unit or gas-fired unit using the optional procedures of appendix D of this part for determining SO_2 mass emissions and heat input or the optional procedures of appendix E of this part for determining NO_X emission rate, for certification and quality assurance testing of fuel flowmeters:

(i) Date of test,

(ii) Upper range value of the fuel flowmeter,

(iii) Flowmeter measurements during accuracy test,

(iv) Reference flow rates during accuracy test,

(v) Average flowmeter accuracy as a percent of upper range value,

(vi) Fuel flow rate level (low, mid-level, or high); and

(vii) Description of fuel flowmeter calibration specification or procedure (in the certification application, or periodically if a different method is used for annual quality assurance testing).

(2) For gas-fired peaking units or oil-fired peaking units using the optional procedures of appendix E of this part, for each initial performance, periodic, or quality assurance/quality control-related test:

(i) For each run of emissions data;

(A) Run start date and time;

(B) Run end date and time;

(C) Fuel flow (lb/hr, gal/hr, scf/hr, bbl/hr, or m^3/hr);

(D) Gross calorific value (heat content) of fuel (Btu/lb or Btu/scf);

(E) Density of fuel (if needed to convert mass to volume);

(F) Total heat input during the run (mmBtu);

(G) Hourly heat input rate for run (mmBtu/hr);

(H) Response time of the O_2 and NO_X reference method analyzers;

(I) NO_X concentration (ppm);

(J) O_2 concentration (percent O_2);

(K) NO_X emission rate (lb/mmBtu); and

(L) Fuel or fuel combination (by heat input fraction) combusted.

(ii) For each unit load and heat input;

(A) Average NO_X emission rate (lb/mmBtu);

(B) F-factor used in calculations;

(C) Average heat input rate (mmBtu/hr);

(D) Unit operating parametric data related to NO_X formation for that unit type (e.g., excess O_2 level, water/fuel ratio); and

(E) Fuel or fuel combination (by heat input fraction) combusted.

(iii) For each test report;

(A) Graph of NO_X emission rate against heat input rate;

(B) Results of the tests for verification of the accuracy of emissions calculations and missing data procedures performed by the automated data acquisition and handling system, and the calculations used to

produce NO_X emission rate data at different heat input conditions; and

(C) Results of all certification tests and quality assurance activities and measurements (including reference method field test sheets, charts, laboratory analyses, example calculations, or other data as appropriate), necessary to substantiate compliance with the requirements of appendix E of this part.

(c) For units with add-on SO_2 and NO_X emission controls following the provisions of §75.34(a)(1) or (a)(2), the owner or operator shall keep the following records on-site in the quality assurance/quality control plan required by section 1 in appendix B of this part:

(1) A list of operating parameters for the add-on emission controls, including parameters in §75.55 (b), appropriate to the particular installation of add-on emission controls; and

(2) The range of each operating parameter in the list that indicates the add-on emission controls are properly operating.

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§75.57 General recordkeeping provisions.

Before April 1, 2000, the owner or operator shall meet the requirements of either this section or §75.54. However, the provisions of this section which support a regulatory option provided in another section of this part must be followed if that regulatory option is used prior to April 1, 2000. On or after April 1, 2000, the owner or operator shall meet the requirements of this section.

(a) *Recordkeeping requirements for affected sources.* The owner or operator of any affected source subject to the requirements of this part shall maintain for each affected unit a file of all measurements, data, reports, and other information required by this part at the source in a form suitable for inspection for at least three (3) years from the date of each record. Unless otherwise provided, throughout this subpart the phrase ''for each affected unit'' also applies to each group of affected or non-affected units utilizing a common stack and common monitoring systems, pursuant to §§75.16 through 75.18, or utilizing a common pipe header and common fuel flowmeter, pursuant to section 2.1.2 of appendix D to this part. The file shall contain the following information:

(1) The data and information required in paragraphs (b) through (h) of this section, beginning with the earlier of the date of provisional certification or the deadline in §75.4(a), (b), or (c);

(2) The supporting data and information used to calculate values required in paragraphs (b) through (g) of this section, excluding the subhourly data points used to compute hourly averages under §75.10(d), beginning with the earlier of the date of provisional certification or the deadline in §75.4(a), (b), or (c);

(3) The data and information required in §75.55 or §75.58 for specific situations, as applicable, beginning with the earlier of the date of provisional certification or the deadline in §75.4(a), (b), or (c);

(4) The certification test data and information required in §75.56 or §75.59 for tests required under §75.20, beginning with the date of the first certification test performed, the quality assurance and quality control data and information required in §75.56 or §75.59 for tests, and the quality assurance/quality control plan required under §75.21 and appendix B to this part, beginning with the date of provisional certification;

(5) The current monitoring plan as specified in §75.53, beginning with the initial submission required by §75.62; and

(6) The quality control plan as described in section 1 of appendix B to this part, beginning with the date of provisional certification.

(b) *Operating parameter record provisions.* The owner or operator shall record for each hour the following information on unit operating time, heat input rate, and load, separately for each affected unit and also for each group of units utilizing a common stack and a common monitoring system or utilizing a common pipe header and common fuel flowmeter:

(1) Date and hour;

(2) Unit operating time (rounded up to the nearest fraction of an hour (in